

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Fostering Innovation and Investment in the)	GN Docket No. 09-157
Wireless Communications Market)	
)	
A National Broadband Plan For Our Future)	GN Docket No. 09-51

REPLY COMMENTS OF THE CHAMBERLAIN GROUP, INC.

The Chamberlain Group, Inc. (“Chamberlain”), by its attorneys, hereby submits these reply comments in response to the Commission’s *Notice of Inquiry* (“*NOI*”) regarding fostering innovation and investment in the wireless communications market.¹ Specifically, Chamberlain responds to comments discussing innovation in the unlicensed wireless bands, interference protection from Part 15 unlicensed devices, and proposed processes for resolving harmful interference between unlicensed devices and licensed mobile services.

I. Introduction

Chamberlain is the world’s largest manufacturer of residential and commercial door operators, access control products and gate operators. Chamberlain’s products include residential garage door openers designed for do-it-yourself installation, professionally installed residential and commercial access control systems, and commercial door and gate operators. Chamberlain’s corporate headquarters are located in Elmhurst, Illinois.

As certain commenters to this proceeding have noted, the Commission’s “light touch” approach to the regulation of unlicensed devices has allowed wireless innovation to thrive in the

¹ See *Fostering Innovation and Investment in the Wireless Communications Market*, Notice of Inquiry, GN Docket No. 09-157, FCC 09-66 (rel. Aug. 27, 2009).

market for unlicensed devices.² Chamberlain respectfully submits, however, that any Commission plan for encouraging innovation in the licensed mobile services also should include provisions to ensure continued innovation in the unlicensed bands. In addition, any regulatory process for resolving disagreements about harmful interference (e.g., a negotiated rulemaking process) should incorporate stakeholders from across the wireless market, including manufacturers of unlicensed devices.

II. The FCC’s Approach to the Unlicensed Bands Has Spurred Innovation

The Commission notes in the *NOI* that it has modified its rules for unlicensed devices to allow manufacturers to introduce devices for virtually any type of application.³ As Panasonic notes in its comments, this “light touch” approach to regulation of unlicensed devices has enabled manufacturers to introduce a multitude of technologies and products such as Wi-Fi, Bluetooth, access control systems, keyless entry systems and RFID.⁴ These technologies have become ubiquitous in the daily lives of consumers and have served as an engine of economic growth that has benefited the public.

Chamberlain supports Panasonic’s recommendation that the Commission continue its “light touch” regulatory approach for the unlicensed bands to facilitate further innovation and investment in unlicensed technologies and devices. At the same time, however, continued innovation in the unlicensed bands requires specific, limited Commission actions, including access to suitable spectrum and protection from harmful interference.

² See *Comments of Panasonic Corporation of North America* (“Panasonic Comments”); *Comments of Motorola, Inc.* (“Motorola Comments”).

³ See *NOI* at ¶ 23.

⁴ See *Panasonic Comments* at 3; see also *NOI* at ¶ 23.

III. The FCC's Plan for Fostering Innovation in the Wireless Market Should Focus on the Conditions Necessary for Continued Innovation in the Unlicensed Bands

As the Commission contemplates how best to foster innovation in the wireless market, it should not overlook unlicensed bands. If wireless innovation in the unlicensed bands is to be maintained, unlicensed devices must have access to spectrum that is suitable for low power operations. In addition, the Commission will need to provide adequate protection to unlicensed devices from high power transmitters. Finally, the Commission will need to take a measured approach to receiver standards.

The majority of the commenters to the *NOI* have focused on fostering innovation in licensed mobile services.⁵ In general, these commenters request that the Commission make more spectrum available for licensed mobile use.⁶ Chamberlain believes that fostering innovation in licensed mobile services is important and is not contrary to the interests of consumers of unlicensed devices. In submitting these comments, however, Chamberlain wishes to emphasize that continued innovation in the unlicensed bands also will require the Commission to focus on the spectrum and interference protection needs of unlicensed devices.

A. Access to Suitable Unlicensed Spectrum

As is the case for licensed mobile services, innovation in the unlicensed bands will require sufficient access to wireless spectrum. Unlicensed devices, however, require access to spectrum that is particularly suitable for the low power uses for which the majority of such

⁵ See, e.g., *Comments of AT&T Inc.* ("AT&T Comments") at 68; *Comments of Verizon Wireless* ("Verizon Comments") at 179; *Comments of Sprint Nextel Corporation* at 2 ("Sprint Nextel Comments"); *Comments of Ericsson* at 13 ("Ericsson Comments"); *Comments of Qualcomm Incorporated* ("Qualcomm Comments") at 27.

⁶ See, e.g., *AT&T Comments* at 69; *Verizon Comments* at 179; *Sprint Nextel Comments* at 3; *Ericsson Comments* at 14; *Qualcomm Comments* at 28.

devices are employed. Specifically, continued access to unlicensed spectrum below 1 GHz will be necessary to ensure that low power devices can penetrate building materials.

As MetroPCS notes in its comments, fostering innovation may warrant the allocation of additional spectrum for unlicensed operations.⁷ Chamberlain, however, does not seek the ability to operate unlicensed devices in additional licensed bands. Nor does Chamberlain necessarily oppose the reallocation of certain unlicensed spectrum for use in licensed mobile operations. Instead, Chamberlain respectfully submits that, if the Commission decides to allocate (or reallocate) additional spectrum for licensed mobile services, it also will be necessary for the Commission to reserve enough spectrum below 1 GHz for the operation of unlicensed devices.

For example, reallocation of unlicensed spectrum on the 300 MHz band for licensed operation may be feasible, but only if the Commission also undertakes a concomitant consolidation of unlicensed spectrum in another band.⁸ Without sufficient access to suitable spectrum below 1 GHz, innovation in the unlicensed bands may be stymied by a lack of operational reliability.

B. Protection from Harmful Interference

In addition to suitable spectrum, unlicensed devices also require protection from harmful interference. In particular, unlicensed devices need to be protected from harmful interference caused by high power devices. To accomplish this goal, the Commission should restrict unlicensed devices to low power, low duty cycle applications. Moreover, the Commission

⁷ See *Comments of MetroPCS Communications, Inc.* (“MetroPCS Comments”) at 42.

⁸ Indeed, all wireless key fobs and similar devices could operate in as little as 1 MHz of bandwidth if the Commission were to require them to comply with the power and duty cycle requirements of Section 15.231(b) of the Commission’s rules. 47 C.F.R. § 15.231(b).

should uniformly apply and strictly enforce future interference standards across the entire range of unlicensed technologies.

Chamberlain agrees with Motorola that the Commission should avoid uncertainty regarding the wireless interference environment by segregating high power and low power technologies.⁹ Furthermore, Chamberlain supports Panasonic's recommendation that the Commission restrict unlicensed technologies to low power (short-range) applications to avoid congestion-related interference in unlicensed spectrum.¹⁰ As Panasonic notes, low power and short range applications allow unlicensed spectrum to be used in multiple locations without interference.¹¹ By contrast, high power applications on unlicensed spectrum generate harmful on-band interference that is difficult, if not impossible, to mitigate. Reserving suitable spectrum for unlicensed devices, and restricting operations on that spectrum to low power applications, will thus foster innovation by promoting reliable and interference-free unlicensed operations.

The Commission also should promulgate interference standards that apply uniformly across the range of unlicensed technologies and are strictly enforced. While existing regulations for Part 15 devices have provided needed market flexibility, exceptions to these regulations also have created an environment in which short-sighted device manufacturers can introduce products into the wireless market that cause harmful interference to licensed and unlicensed devices. Moreover, as the Association for Maximum Service Television and the National Association of

⁹ See Motorola Comments at 10.

¹⁰ Panasonic Comments at 5.

¹¹ *Id.*

Broadcasters note, the proliferation of unlicensed devices in homes has made it difficult even to determine which device is causing interference to other wireless users.¹²

Interference protection for unlicensed devices has thus been driven by the lowest common denominator of protection. The consequences have been borne not by the manufacturers of interfering devices, but rather by consumers of wireless devices and by long-term participants in the market for wireless devices, such as Chamberlain. For this reason, Chamberlain respectfully submits that any future interference standards, including receiver standards, should apply to all unlicensed devices without exception.

C. Receiver Standards

Several commenters recommend that the Commission adopt receiver standards for unlicensed devices to mitigate interference issues.¹³ Chamberlain believes that receiver standards may serve a useful purpose in avoiding harmful interference to unlicensed devices. Indeed, Chamberlain agrees with Motorola that the Commission should address interference mitigation from a system perspective.¹⁴ However, in considering receiver standards for unlicensed devices, the Commission also should account for limitations of such an approach to resolving interference issues.

As Motorola notes, interference standards that focus on interference experienced by the receiver rather than technical rules on transmitted power raise significant practical issues.¹⁵ For

¹² *Comments of the Association for Maximum Television, Inc. and the National Association of Broadcasters* (“NAB Comments”) at 8.

¹³ See, e.g., *Comments of Google Inc.* at 25; *Comments of Information Technology and Innovation Foundation* at 2.

¹⁴ See Motorola Comments at 13.

¹⁵ *Id* at 14.

example, any such standards may be out of date as soon as they are promulgated.¹⁶ In addition, it will be difficult to find the right balance between receiver quality, cost and other factors.¹⁷

More importantly, receiver standards will not protect unlicensed devices from high-power transmissions on the unlicensed bands. This is a matter of physics: There is not much that can be done to mitigate the impact of a strong, close signal. For this reason, Chamberlain agrees with Panasonic that the Commission should consider other ways to prevent low-power uses from being overridden by higher-power emissions, including requiring lower transmitter power.¹⁸ Moreover, and as already discussed above, there are other benefits to restricting operations on the unlicensed bands to low power, short range, operations, including facilitating uses in multiple areas. Consequently, power limitations are more likely to benefit unlicensed operators than adoption of receiver standards, no matter how stringent.

In addition, interference protection may be best addressed through other techniques. For instance, Chamberlain has noted that some users of the 300 MHz band have had concerns about interference, and many of those issues could be addressed if unlicensed devices in those bands could use spread spectrum techniques, which are disfavored under the current rules. Modifying the rules to accommodate spread spectrum technologies in the 300 MHz band, therefore, would better address interference issues than adopting receiver standards.

¹⁶ See AT&T Comments at 90 (if such standards are based on existing equipment, they may be several years behind the current production and development of state of the art wireless devices).

¹⁷ See NAB Comments at 8 (a requirement that consumers use higher quality receivers may disrupt significant investments in existing equipment and consumer expectations regarding the performance of such equipment).

¹⁸ See Panasonic Comments at 6. The Commission also should continue to protect unlicensed devices from interference from adjacent licensed bands. *Id.*

IV. The FCC's Plan for Resolving Interference Issues Should Incorporate Stakeholders Across the Wireless Market

The wireless market encompasses many stakeholders, and any change in the Commission's processes for resolving interference issues will have an impact across the entire market, from licensed mobile services to unlicensed operations. Accordingly, any Commission process for resolving interference issues should allow for all stakeholders, including manufacturers of unlicensed devices such as Chamberlain, to meaningfully participate in the resolution of harmful interference across the wireless spectrum.

The current rulemaking process is susceptible to being dominated by the largest players in a market, which have the resources to strongly and persistently advocate for their interests over the course of a long and protracted rulemaking. Often, the contributions of smaller market players are lost in the current process. Because of the large diversity of interests in the unlicensed bands, and the presence of large and powerful players in the licensed bands, the Commission should work to ensure that all voices in the wireless market – including those of smaller players in the unlicensed bands – are heard.

Chamberlain supports solutions that will balance the needs of stakeholders in both the licensed and unlicensed bands. Chamberlain and other manufacturers of unlicensed devices such as Panasonic are also uniquely able to provide valuable contributions from the perspective of unlicensed operators with a long history of innovation in the unlicensed bands. Moreover, as the Commission has recognized in recent proceedings, alternative mechanisms for gathering data and evaluating options may assist the Commission in reaching a superior result.¹⁹ For these

¹⁹ See, e.g., *A National Broadband Plan for Our Future*, Notice of Inquiry, GN Docket No. 09-51, FCC 09-31, ¶ 32 (rel. Apr. 8, 2009) (accurate and comprehensive data plays a critical role); *Preserving the Open Internet*, Notice of Proposed Rulemaking, GN Docket No. 09-191, FCC 09-93, ¶ 177 (rel. Oct. 22, 2009) (describing the creation of an “inclusive, open, and transparent process” for obtaining the best technical advice).

reasons, Chamberlain would support a negotiated rulemaking process, the use of workshops – both large and small – or any other alternative process that ensures the widest level of participation from stakeholders across the wireless market.

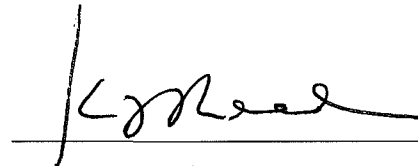
V. Conclusion

For all these reasons, Chamberlain respectfully requests that the Commission act in accordance with these reply comments.

Respectfully Submitted,

THE CHAMBERLAIN GROUP, INC.

By:

A handwritten signature in black ink, appearing to read 'K. Reed', is written over a horizontal line.

Kevin F. Reed
J.G. Harrington

Its Attorneys

DOW LOHNES PLLC
1200 New Hampshire Avenue, N.W., Suite 800
Washington, D.C. 20036
(202) 776-2000

November 5, 2009